

2010 Consumer Confidence Report

Water System Name: **Travis AFB**

Report Date: 8 Jun 2011

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2010.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien.

Type of water source(s) in use: Lakes, Canal, River, Aqueduct, and Well

Name & location of source(s): Surface water (90%) from Lake Berryessa and Lake Oroville through the Putah South Canal, the Sacramento River, and the North Bay Aqueduct. Ground water (10%) from the three wells located at the Cypress Lakes Golf Course.

Drinking Water Source Assessment information: Officially updated April 2010, 2011 assessment pending. Please contact Bioenvironmental Engineering for location and any **CLASSIFIED** details of the report.

Time and place of regularly scheduled board meetings for public participation: Questions regarding the drinking water system can be submitted via the Travis AFB public environmental website <http://www.travis.af.mil/enviro>.

For more information, contact: TSgt Ashley Holman

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TERMS USED IN THIS REPORT

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency (USEPA).

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Primary Drinking Water Standards (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Variances and Exemptions: Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

ND: not detectable at testing limit

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter (ug/L)

ppt: parts per trillion or nanograms per liter (ng/L)

ppq: parts per quadrillion or picogram per liter (pg/L)

pCi/L: picocuries per liter (a measure of radiation)

uS/cm: micro Siemens per centimeter (a measure of electrical conductivity)

N/A: Not Applicable

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

- *Microbial contaminants*, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- *Inorganic contaminants*, such as salts and metals that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides* that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals that are by-products of industrial processes and petroleum production. They can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- *Radioactive contaminants* that can be naturally-occurring or be the result of oil, gas production, and mining activities.

In order to ensure that tap water is safe to drink, the USEPA and the state Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Tables 1, 2, 3, 4, and 5 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The Department allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants (complete if bacteria detected)	Highest No. of Detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	2	0	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i>	0	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or <i>E. coli</i>	0	Human and animal fecal waste

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER

Lead and Copper (complete if lead or copper detected in the last sample set)	No. of samples collected	90 th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	30	1.5	0	15	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	30	0.25	0	1.3	0.17	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	18	18	N/A	N/A	Salt present in the water and is generally naturally occurring
Hardness (ppm)	119	68 - 194	N/A	N/A	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Microbiological Contaminants					
Total Coliform Bacteria (Total Coliform Rule)	2	ND - 1	> 5% of total monthly samples	(0)	Naturally present in the environment
Clarity-Turbidity (NTU) ²					
TT = 1 NTU	0.07	0.04 – 0.15	1.0	N/A	Soil runoff
TT = 95% of samples $0.3 \leq$ NTU	100% of samples \leq 0.3		0.3	N/A	Soil runoff
Radioactive Contaminants					
Alpha Particle Activity (pCi/L)	1.84	3.0	15	(0)	Erosion of natural deposits
Beta Particle Activity (pCi/L)	3.59	4.0	50	(0)	Decay of natural and man-made deposits
Radium 226 (pCi/L)	0.075	1.0	1	(0)	Erosion of natural deposits
Radium 228 (pCi/L)	0.028	1.0	1	(0)	Erosion of natural deposits
Uranium (pCi/L)	1.37	1.0	20	0.43	Erosion of natural deposits
Inorganic Contaminants					
Aluminum (ppm)	0.1	X	1	0.6	Erosion of natural deposits; residual from water treatment process
Copper (ppm)	0.153	0.025	1.0	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride Treatment (ppm)	0.9	0.26 – 1.29	2.0	1	Water additive that promotes strong teeth
Lead (ppb)	0.58	2.5	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Nitrate (as Nitrate, NO ₃) (ppm)	10.1	7.3-12	45	45	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrite (as nitrogen, N) (ppm)	ND	ND	1	1	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Disinfection Byproducts, Disinfectant Residuals, and Disinfection Byproduct Precursors - STAGE 1					
TTHM's (Total Trihalomethanes) (ppb)	50	1.0	80	N/A	Byproduct of drinking water disinfection
Halocetic Acids (ppb)	27.2	1.0	60	N/A	Byproduct of drinking water disinfection
Total Organic Carbon (% Removal Ratio) ³	100% of samples \geq 1	1.2 – 2.6	TT = RAA \geq 1	N/A	

Disinfection Byproducts, Disinfectant Residuals, and Disinfection Byproduct Precursors - STAGE 2					
TTHM's (Total Trihalomethanes) (ppb)	63.3	1.0	80	N/A	Byproduct of drinking water disinfection
Halocetic Acids (ppb)	15.6	1.0	60	N/A	Byproduct of drinking water disinfection

¹There are no determined ranges of detection for these constituents since they are unknown or are only sampled once annually as required by law.

²Turbidity is a measurement of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system. For compliance, at least 95% of all samples must be less than or equal to 0.3 NTUs and no one sample may be greater than 1.0 NTUs. One hundred percent of samples were in compliance.

³Compliance is based on the running annual average (RAA) determined quarterly. This means that every three months, we average all samples taken during the prior twelve-month period

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Aluminum (ppb)	100	X	200	N/A	Erosion of natural deposits; residual from water treatment process
Chloride (ppm)	19	9.5 – 51	500	N/A	Runoff/leaching from natural minerals
Manganese (ppb)	32	X	50	N/A	Leaching from natural minerals
Odor-Threshold Units	1.6	1.0 – 2.0	3	N/A	Naturally-occurring organic materials
Specific Conductance (uS/cm)	365	240 - 586	1600	N/A	Substances that form ions when in water
Sulfate (ppm)	50	35-84	500	N/A	Runoff/leaching from natural minerals
Total Dissolved Solids (ppm)	226	94 - 366	1000	N/A	Runoff/leaching from natural minerals

* Some final values listed are monthly, quarterly, or annual averages.

Additional General Information on Drinking Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. 60th Civil Engineering Utilities Shop is responsible for providing high quality drinking water through routine maintenance and flushing of the water distribution system, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Monitoring For Cryptosporidium

Beginning in 2006, federal regulations required us to monitor our raw untreated water sources (the Putah South Canal and the North Bay Aqueduct) for levels of Cryptosporidium contamination for two years. After analyzing twenty-four monthly samples from each source, we did not find Cryptosporidium in the North Bay Aqueduct water, but found low levels in two samples in the Putah South Canal. Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water and/or finished water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.